

REMARKS

Claims 24-47 are active in the case. Reconsideration is respectfully requested.

The present invention relates to a polymer for matte injection molded articles.

Claim Objection and Amendments

Applicants maintain that Claim 30 is properly dependent of Claim 24 for several reasons. In the first place the term “consisting essentially of” in Claim 24 pertains only to the polymer matrix component of the claim. Any matrix polymer component of a composition that is not within the scope of the four components i) to iv) is outside the scope of the present claims, even though Claim 24 is directed to a polymer mixture that is “comprised of” other components. In the case of Claim 30 the three (meth)acrylate polymer components of d), f) and g) fall within the scope of components i) and ii) of Claim 24 limited to the polymer matrix component of the composition which is limited to the four components described in the description of polymer matrix a). Claim 30, in fact, has been amended in order to provide clarity and greater continuity between the polymer matrix material a) of Claim 24 and the more specific examples of polymer components d), f) and g) of Claim 30, while the impact modifier component e) of Claim 30 is established as the same as the impact modifier of Claim 24. Further, the term “comprises” has been eliminated from Claim 30.

As to the matter of the softening point, the fact that (meth)acrylate polymer a) has a Vicat softening point of at least 104° C does not preclude the (meth)acrylate (co)polymers of d), f) and g), each having the stated solution viscosity, from the scope of component a) of Claim 24.

Finally, the addition of the phrase “into the polymer mixture” makes it clear that components a) and b) constitute a polymer mixture. Entry of the amendments to Claim 30 is respectfully requested. Withdrawal of the objection is respectfully requested.

Prior Art Rejection

Claims 24-37, 39, 42-46 stand rejected based on 35 USC 103(a) as obvious over Kress et al, U. S. Patent 4,895,898 in view of Lichtenstein et al, U. S. Patent 5,621,028. This ground of rejection is respectfully traversed.

Applicants continue to maintain that the primary reference, Kress et al, discloses a thermoplastic polymer molding composition that is completely different from that which is presently claimed. The composition disclosed is formed from four components identified as (A), (B), (C) and (D) (col 6, lines 44-54). The composition is described in greater detail in column 1. As is clear from the disclosure in column 1, a component of the molding composition is a matrix thermoplastic polycarbonate material (A), which is a major component of the composition at 20 to 80 parts by weight. On the other hand, the polymer mixture of the present claims does **not** contain such a polycarbonate matrix polymer; but rather one of the (co)polymer components i) to iv). (Applicants maintain that the restricting language of Claim 24 does in fact eliminate the matrix thermoplastic polycarbonate material (A) from the scope of the present claims, and that closed language employed eliminates the polycarbonate from the present claims because its only disclosed use in the composition of the reference is as a matrix polymer.) On this basis alone, the present polymer mixture is not suggested by the Kress et al patent.

The polymer composition of the patent also has a component (B), which constitutes from 10-60 parts by weight of the polymer mixture and is a rubbery material that is formed by graft polymerizing a mixture of one or more ethylenically unsaturated monomers identified as (B1.1) and one or more ethylenically unsaturated monomers identified as (B1.2) (Each of the mixed monomer materials include methyl methacrylate as a possible monomer.) onto a rubber that has a glass transition temperature of less than 10° C. Suitable rubbers are disclosed in the paragraph bridging columns 4 and 5 of the patent. On the other hand, no such

graft (co)polymer system is employed as a component of the present composition. Since the graft copolymer component (B) has a rubber base, it appears that component (B) may function as an impact modifier in the composition of the patent. Despite the fact that component (B) may be partly composed of a methacrylate monomer, this does not make component (B) of the patent the same as or equivalent to either the polymer matrix material or the impact modifier of the present claims.

Further, the polymer composition of the patent contains two components (C) and (D), neither of which is within the scope of components b) and c) of the present claims.

The Lichtenstein et al patent has been cited for its disclosure of plastic particles to a polymer matrix comprised of at least 80 % of units of methyl methacrylate. In particular, the patent discloses particles of crosslinked polystyrene as preferred. However, because of the substantial differences between the relatively simple homo- or co-polymer of methyl methacrylate disclosed in the patent, it is clear that even if one of skill was led to combine the teachings of Kress et al with Lichtenstein et al, one would not arrive at the present composition as claimed. Accordingly, the combined references fail to suggest the polymer composition as claimed in Claim 24. Moreover, since the other dependent claims grouped with Claim 14 all depend upon the base polymer composition as described in Claim 24, these claims are also distinguished over the cited references. Withdrawal of the outstanding ground of rejection is respectfully requested.

Claim 41 stands rejected based on 35 USC 103 as obvious over Kress et al, U. S. Patent 4,895,898 in view of Lichtenstein et al, U. S. Patent 5,621,028 further in view of Parker, U. S. Patent 5,252,667. This ground of rejection is respectfully traversed.

The feature of obtaining the polymer mixture of the present invention in the form of a palletized molding composition is a secondary feature upon which patentability does not depend. Since the claim is dependent on Claim 24, which is believed to be patentably

distinguished over the primary references, the claimed subject matter is of Claim 41 is distinguished over the combined prior art, and withdrawal of the outstanding ground of rejection is respectfully requested.

Claims 24-26, 28 and 29 stand rejected based on 35 USC 103(a) as obvious over Albrecht, U. S. Patent 4,833,221 in view of Suetterlin et al, U. S. Patent 4,513,118 in view of Lichtenstein et al, U. S. Patent 5,621,028. This ground of rejection is respectfully traversed.

Albrecht discloses a specific methyl methacrylate copolymer in which the methacrylate ester is the chief monomer component. The method of polymerization employed results in a composition in and of itself is stated as avoiding drawbacks of prior art processes which include excessively low reduced viscosity, a high residual monomer content and discoloration. The patent contains no disclosure of the necessity of adding other ingredients to the copolymer, such as an impact modifier and plastic particles in order to modify the characteristics of the composition. Accordingly, the secondary applied prior art goes beyond the disclosure of Albrecht so that the combination of documents fails to suggest the invention of Claims 24-26, 28 and 29.

Claims 33 and 36 stand rejected based on 35 USC 103(a) as obvious over Kress et al, U. S. Patent 4,895,898 in view of Lichtenstein et al, U. S. Patent 5,621,028 and further in view of Albrecht, U. S. Patent 4,833,221. This ground of rejection is respectfully traversed.

Applicants again question the relevance of the cited Kress et al patent to the present invention, because the formulation described in the patent is quite unlike that of the present invention. None of the present claims are compatible with the teaching of a thermoplastic polycarbonate as a matrix material and a copolymer of monomers grafted onto a rubber substrate. In fact, the present claim language excludes a thermoplastic polycarbonate as a matrix polymer material, which, in fact, is its function in the composition of Kress et al.

Applicants also restate their position as given above with respect to Albrecht in that the disclosed composition of a methacrylate ester copolymer is complete in and of itself which fact does not permit the addition of additional ingredients in the same in order to satisfy other use requirements such as the addition of an impact modifier. Withdrawal of the reference is respectfully requested.

Claims 34 and 38 stand rejected based on 35 USC 103(a) as obvious over Kress et al, U. S. Patent 4,895,898 in view of Lichtenstein et al, U. S. Patent 5,621,028 and further in view of Suetterlin et al, U. S. Patent 4,513,118. This ground of rejection is respectfully traversed.

Applicants maintain their position relative to the cited Kress et al patent as stated above. The fact is that a resin composition based on a thermoplastic polycarbonate as the primary polymer component of the matrix of the composition places the disclosure of Kress et al well beyond the present claims.

Applicants also maintain that the subject matter of Claims 34 and 38 is not subject matter upon which patentability depends. The claims, however, incorporate the patentable features of ultimately Claim 24 (through Claim 30) therein. Thus, withdrawal of the rejection is respectfully requested.

Claim 40 stands rejected based on 35 USC 103(a) as obvious over Kress et al, U. S. Patent 4,895,898 in view of Lichtenstein et al, U. S. Patent 5,621,028 and further in view of Suetterlin et al, U. S. Patent 4,513,118 and further in view of NieSsner et al, '7890. This ground of rejection is respectfully traversed.

Claim 40 is directed to the specific embodiment of stearyl alcohol as a mold-release agent. This is not a feature upon which patentability of the invention depends. Rather, the claim is ultimately dependent upon Claim 24 (through Claim 30) and therefore is believed to

be patentably distinguished over the applied prior art. Withdrawal of the rejection is respectfully requested.

Claims 24, 26, 27 and 47 stand rejected based on 35 USC 103(a) as obvious over Rhein et al, EP 0 691 351 in view of Suetterlin, U. S. Patent 5,621,028 and Lichtenstein et al, U. S. Patent 5,621,028. This ground of rejection is respectfully traversed.

Applicants maintain their position as stated with respect to the Rhein et al disclosure. The reference describes a method of conducting a continuous process of producing a thermoplastic molding compound based on polymethyl methacrylate. The thermoplastic molding material by mixing the components of a major quantity of methyl methacrylate, an alkyl acrylate, a mercaptan and a radical initiator and less than 5 parts by wt of other non-polymerizable components and then conducting copolymerization. The polymer material that is obtained is complete in and of itself, and does not show or suggest a (meth)acrylate molding composition that in addition contains an impact modifier and plastic particles. These additives result in a materially different poly(meth)acrylate than the composition of the present invention, even though the reference does give two examples in which the poly(meth)acrylate component has a Vicat softening temperature above 104° C. The reference does not matrix polymer materials identified as components (ii), (iii) and (iv), and does not show any of these materials in combination with a specific cross-linked (meth)acrylate impact modifier and plastic particles. The disclosure of the Rhein et al reference is not believed sufficient to suggest the present claims

Neither the Suetterlin nor the Lichtenstein et al patents overcomes the deficiencies of Rhein et al and withdrawal of the outstanding ground of rejection is respectfully requested.

Obviousness-type Double Patenting


Claims 24-26, 28-31, 22-40 and 42 stand provisionally rejected based on the judicially created doctrine of obviousness-type double patenting over Claims 1-3 and 6-12 of copending application Serial No. 11/813,946. This ground of rejection is respectfully traversed.

The polymer mixture that is claimed in the copending case is formulated of three different (meth)acrylate copolymers and a cross-linked poly(meth)acrylate. The first (meth)acrylate copolymer is formed by the copolymerization of methyl methacrylate, styrene and maleic anhydride and has a solution viscosity (CHCl_3) at 25°C of $\leq 55 \text{ ml/g}$. The second (meth)acrylate copolymer is stated as having a solution viscosity (CHCl_3) at 25°C of $\geq 65 \text{ ml/g}$. The third relatively high molecular weight (meth)acrylate copolymer is stated as having a solution viscosity (CHCl_3) at 25°C ranging from 50 to 55 ml/g. The present claims, however, do not claim a (meth)acrylate polymer material formed from a mixture of (meth)acrylate copolymers having the stated viscosity characteristics. Moreover, the present claims require the presence of an impact modifier and plastic particles. These limitations are not a part of the presently claimed invention. Accordingly, the obviousness-type double patenting rejection fails and withdrawal of the outstanding ground of rejection is respectfully requested.

It is believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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